

1. In a system that includes a master component that is configured to communicate with one or more slave components over a clock wire and a data wire, a method for the master component communicating to dynamically adjust a frame structure for a guaranteed header two-wire interface used to communicate with the one or more slave components, the method comprising the following:

an act of determining that a first operation is to be performed on a first slave component of the one or more slave components;

an act of transmitting at least a portion of a first frame to the one or more slave components including a first operation code that represents the first operation;

an act of determining that a second operation is to be performed on a second slave component of the one or more slave components; and

an act of transmitting at least a portion of a second frame to the one or more slave components include a second operation code that represents the second operation, wherein the second frame includes fields that are not included in the first frame.

2. A method in accordance with Claim 1, wherein the first and second frames are for operations to be performed on the same slave component.

3. A method in accordance with Claim 1, wherein the first and second frames are for operations to be performed on different slave components.

4. A method in accordance with Claim 1, further comprising the following:

an act of the master component asserting a clock signal on the clock wire during the acts of transmitting.

5. A method in accordance with Claim 1, wherein the fields that are included in the second frame, but not the first frame, comprises the following:

an extended field that includes extended operation code information.

6. A method in accordance with Claim 1, wherein the fields that are included in the second frame, but not the first frame, comprise the following:

an extended field that includes extended address information that goes beyond a basic address field included in the first frame.

7. A method in accordance with Claim 6, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

a cyclic redundancy checking field include cyclic redundancy checking information.

8. A method in accordance with Claim 7, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an acknowledgement field that contains an acknowledgement of successful completion of the operation.

9. A method in accordance with Claim 8, wherein the acknowledgement field further indicates that the slave component is suppressing the operation in any case.

10. A method in accordance with Claim 8, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an error field that contains information regarding whether or not the cyclic redundancy checking information shows an error in transmission.

11. A method in accordance with Claim 8, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an error field that indicates whether or not there was a protocol violation detected.

12. A method in accordance with Claim 7, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an error field that contains information regarding whether or not the cyclic redundancy checking information shows an error in transmission.

13. A method in accordance with Claim 6, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an acknowledgement field that contains an acknowledgement of successful completion of the operation.

14. A method in accordance with Claim 1, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

a cyclic redundancy checking field include cyclic redundancy checking information.

15. A method in accordance with Claim 14, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an acknowledgement field that contains an acknowledgement of successful completion of the operation.

16. A method in accordance with Claim 15, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an error field that contains information regarding whether or not the cyclic redundancy checking information shows an error in transmission and/or whether there was a protocol violation detected.

17. A method in accordance with Claim 14, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an error field that contains information regarding whether or not the cyclic redundancy checking information shows an error in transmission.

18. A method in accordance with Claim 14, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an acknowledgement field that contains an acknowledgement of successful completion of the operation.

19. A system comprising the following:

a master component;

one or more slave components;

a clock wire interconnected between the master component and the slave component;

a data wire interconnected between the master component and the slave component,

wherein the master component is configured to perform the following:

an act of determining that a first operation is to be performed on a first slave component of the one or more slave components;

an act of transmitting at least a portion of a first frame to the one or more slave components including a first operation code that represents the first operation;

an act of determining that a second operation is to be performed on a second slave component of the one or more slave components; and

an act of transmitting at least a portion of a second frame to the one or more slave components include a second operation code that represents the second operation, wherein the second frame includes fields that are not included in the first frame.

20. A system in accordance with Claim 19, wherein the first and second frames are for operations to be performed on the same slave component.

21. A system in accordance with Claim 19, wherein the first and second frames are for operations to be performed on different slave components.

22. A system in accordance with Claim 19, wherein the fields that are included in the second frame, but not the first frame, comprise the following:

an extended address data field that includes extended address information that goes beyond a basic address field included in the first frame.

23. A system in accordance with Claim 19, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

a cyclic redundancy checking field include cyclic redundancy checking information.

24. A system in accordance with Claim 23, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an error field that contains information regarding whether or not the cyclic redundancy checking information shows an error in transmission.

25. A system in accordance with Claim 19, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an acknowledgement field that contains an acknowledgement of successful completion of the operation.

26. A master component that is configured to do the following when coupled to a slave component via a clock wire and a data wire:

an act of determining that a first operation is to be performed on a first slave component of the one or more slave components;

an act of transmitting at least a portion of a first frame to the one or more slave components including a first operation code that represents the first operation;

an act of determining that a second operation is to be performed on a second slave component of the one or more slave components; and

an act of transmitting at least a portion of a second frame to the one or more slave components include a second operation code that represents the second operation, wherein the second frame includes fields that are not included in the first frame.

27. A master component in accordance with Claim 26, wherein the first and second frames are for operations to be performed on the same slave component.

28. A master component in accordance with Claim 26, wherein the first and second frames are for operations to be performed on different slave components.

29. A master component in accordance with Claim 26, wherein the fields that are included in the second frame, but not the first frame, comprise the following:

an extended address data field that includes extended address information that goes beyond a basic address field included in the first frame.

30. A master component in accordance with Claim 26, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

a cyclic redundancy checking field include cyclic redundancy checking information.

31. A master component in accordance with Claim 30, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an error field that contains information regarding whether or not the cyclic redundancy checking information shows an error in transmission.

32. A master component in accordance with Claim 26, wherein the fields that are included in the second frame, but not the first frame, further comprise the following:

an acknowledgement field that contains an acknowledgement of successful completion of the operation.

33. A master component in accordance with Claim 26, wherein the master component is implemented in a laser transmitter/receiver.

34. A master component in accordance with Claim 33, wherein the laser transmitter/receiver is a 1G laser transceiver.

35. A master component in accordance with Claim 33, wherein the laser transmitter/receiver is a 2G laser transceiver.



36. A master component in accordance with Claim 33, wherein the laser transmitter/receiver is a 4G laser transceiver.

37. A master component in accordance with Claim 33, wherein the laser transmitter/receiver is a 10G laser transceiver.

38. A master component in accordance with Claim 33, wherein the laser transmitter/receiver is a laser transceiver suitable for fiber channels greater than 10G.

39. A master component in accordance with Claim 33, wherein the laser transmitter/receiver is an XFP laser transceiver.

40. A master component in accordance with Claim 33, wherein the laser transmitter/receiver is an SFP laser transceiver.

41. A master component in accordance with Claim 33, wherein the laser transmitter/receiver is a SFF laser transceiver.